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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,471	03/23/2004	Naoya Kuzawa	249-334	1708
23117	7590	04/14/2005	EXAMINER	
NIXON & VANDERHYE, PC			MCCLENDON, SANZA L	
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ARLINGTON, VA 22201-4714			1711	

DATE MAILED: 04/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/806,471

Applicant(s)

KUZAWA ET AL.

Examiner

Sanza L. McClendon

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2004.  
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-5 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/24/04  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-5 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of copending Application No. 10/787,743 (also US 2004/0171714) in view of Higashino et al (US 2003/0149159). Although the conflicting claims are not identical, they are not patentably distinct from each other because they appear to have overlapping subject matter. The primary difference is the silica having a primary particle size of 0.5  $\mu$ m or less and has had its surface treated to be hydrophobic in the instant claims. However Higashino et al discloses similar molded products obtained for irradiating and/or heat treatment a compositions comprising tetrafluoroethylene-propylene copolymers, triallyl isocyanurate, silica that has been surface modified to be hydrophobic having a mean particles size of not more than 0.5  $\mu$ m, which has been formed into a molded product. Therefore it would have been obvious for an artisan of ordinary skill in the art to obtain a fluororubber molded article by irradiation crosslinked a molded article for a fluororubber composition comprising tetrafluoroethylene-propylene copolymers having a metal content of less than 1.5—wt%, at least from 1 to 30 parts by weight silica that has been hydrophobized and a triallyl isocyanurate crosslinking agents from the teachings of the combined references.

Art Unit: 1711

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 1-5 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 6-10 of copending Application No. 10/486,388 in view of Higashino et al (2003/0149159). Although the conflicting claims are not identical, they are not patentably distinct from each other because they appear to overlap in scope. The primary difference is the addition of the hydrophobic modified silica in the molded product. However Higashino et al discloses similar molded products obtained for irradiating and/or heat treatment a compositions comprising tetrafluoroethylene-propylene copolymers, triallyl isocyanurate, silica that has been surface modified to be hydrophobic having a mean particles size of not more than 0.5 mm, which has been formed into a molded product. Therefore it would have been obvious for an artisan of ordinary skill in the art to obtain a fluororubber molded article by irradiation crosslinked a molded article for a fluororubber composition comprising tetrafluoroethylene-propylene copolymers having a metal content of less than 1.5—wt%, silica that has been hydrophobized and a triallyl isocyanurate crosslinking agents from the teachings of the combined references. Another difference appears to be the addition of the peroxide crosslinking agent in 10/486,388. However, Higashino et al teaches peroxide crosslinkers in combination with crosslinking aide, such as triallyl isocyanurate, are well known in fluororubber molded articles crosslinking methods. The metallic content as found in claim 5 of 10/486,388 is deemed to be encompassed by the 1.5—wt% or less as found in the instant claims and therefore is not a discernible difference.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102/35 USC §103***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed

Art Unit: 1711

under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Higashino et al (2003/0149159).

7. Preliminary remarks: claims 1-3 are product-by-process claims and therefore “even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of the product does not depend on the method of production. Therefore, if the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process—see *In re Thorpe*, 227 USPQ 967 (Fed. Cir. 1985). Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Higashino et al discloses polymer compositions containing clean fillers. Said compositions can be used to make molded products, such as O-rings, seal rings, and various parts for semiconductor apparatuses. Higashino et al disclose that fluoroelastomers can be used, such as tetrafluoroethylene-propylene copolymers—see [0060]. In addition it is taught inert fillers, such as silica can be used when reinforcing properties are desired—see [0016]. Said inert filler can be modified to be hydrophobic to reduce the moisture on the surface of said filler. Additionally it is disclosed said fillers can be particle sizes of less than 0.5 mm—see [0025]. Said composition additionally comprises crosslinking agents and crosslinking aids. Said crosslinking can be obtained by exposure to radiation, such as electron beam—see [0046]. Said crosslinking agents can be peroxides in combination with crosslinking aids, such as triallyl isocyanurate—see [0065] and [0068].

Art Unit: 1711

Said crosslinking aide (triallyl isocyanurate) can be added in amounts from .01 to 10 parts by weight. Per examples Higashino et al teaches compression molding said composition to form a molded article of the desired shape. Additionally, it is taught by example that crosslinking can be effected by heat treatment, however it is also taught by disclose that said crosslinking can be effected by exposure to radiation. While it is not explicitly taught by the reference crosslinking said molded product by irradiation with an additionally heat treatment as defined by claims 3 and 5, the two crosslinking methods are disclosed in the reference. In the alternative, it would have been obvious for an artisan of ordinary skill in the art to crosslink using both radiation and heat treatments. The motivation would have been a reasonable expectation of fast and complete cure of the obtained molded article in the absence of unexpected results and/or convincing arguments to the contrary.

***Claim Rejections - 35 USC § 103***

8. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kazuki et al (JP 2003-096220) in view of Higashino et al (US 2003/0149159).

Preliminary remark: claims 1-5 are product-by-process claims and therefore “even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of the product does not depend on the method of production. Therefore, if the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process—see *In re Thorpe*, 227 USPQ 967 (Fed. Cir. 1985). Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15. Additionally, the text sections from JP 2003-096220 are taken from a rough machine translation from PAJ.

Kazuki et al is disclosed in the instant disclosure as comprising a radiation crosslinked fluororubber article obtained by irradiating a molded articles comprising a composition containing a fluororubber resin, such as tetrafluoroethylene-propylene copolymer having a metal content of 1.5—wt% or less. While the instant disclosure states Kazuki et al teaches without a crosslinking agent, the examiner disagrees. Per paragraph [0021] it is disclosed that it is suitable to use crosslinking agents and other compounding agents when mechanical strength is desired over purity. The only disclosed crosslinking agent can be found in the comparative examples, which is triallyl isocyanurate. Therefore the examiner deems that it would have been obvious for a skill artisan to using said crosslinking agent with an expectation of success. The motivation would have been a

Art Unit: 1711

reasonable expectation of successfully improving the mechanical properties within the molded article. Kazuki et al does not expressly teach adding hydrophobic modified silica fillers.

Higashino et al discloses similar molded products obtained for irradiating and/or heat treatment a compositions comprising tetrafluoroethylene-propylene copolymers, triallyl isocyanurate, silica that has been surface modified to be hydrophobic having a mean particles size of not more than 0.5 mm as reinforcement filler, which has been formed into a molded product.

Kazuki et al and Higashino et al are analogous art because they are from the same field of endeavor that is the art of fluororubber-molded articles.


Therefore it would have been obvious for an artisan of ordinary skill in the art to obtain a fluororubber molded article by irradiation crosslinked a molded article for a fluororubber composition comprising tetrafluoroethylene-propylene copolymers having a metal content of less than 1.5—wt%, triallyl isocyanurate crosslinking agents as disclosed by Kazuki, and, additionally comprising silica that has been surface modified to be hydrophobic, as taught by Higashino et al. The motivation would have been a reasonable expectation of obtaining a crosslinked fluororubber article having adequate mechanical properties in the absence of evidence to the contrary and/or unexpected results.

### *Conclusion*

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L. McClendon whose telephone number is (571) 272-1074. The examiner can normally be reached on Monday through Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sanza L. McClendon  
Examiner

4/12/05

Art Unit 1711